GeoTrans

Specialists in Solving Ground-Water Problems

February 25, 1988

Mr. Jeffrey T. Lawson
ERT
696 Virginia Road
Concord, MA 01742

Wells 6+11
11.9
548875

Subject: UniFirst bedrock aquifer test

Dear Jeff:

In response to our telephone conversation of February 24, 1988, we recommend the following performance measures regarding water level changes on the Cryovac property in response to pumping from the UniFirst deep bedrock well. The recommended performance measures are based on consideration of natural groundwater flux and observed historic water level variations on the Cryovac property. The three performance criteria are changes in horizontal and vertical hydraulic gradients between selected monitoring well clusters. If any one of the criteria is exceeded, then a determination to reduce or cease pumping from the UniFirst deep bedrock well needs to be made. Such determination will be made by representatives for W.R. Grace and UniFirst. Jay Bridge will be the W.R. Grace representative regarding this matter. He will be at the Cryovac property for some time each day during the testing, and available by telephone at other times.

1. The hydraulic gradient between wells G10DB and G3DB shall not be increased by more than 50 percent for more than 24 hours and shall not be increased by more than 100 percent at any time during the test. The increased horizontal flux of water which would result from a 50 percent increase in hydraulic gradient for a period of 72 hours is equivalent to the horizontal water flux which would occur under natural conditions during a 36-hour period. Pre-pumping water level measurements in wells G10DB and G3DB will be used to establish the baseline condition for evaluating changes in hydraulic gradient.

2. The natural component of hydraulic gradient between wells G21D and G3D shall not be reversed during the test. Pre-pumping water level measurements will be used to identify the natural conditions.

3. The measured vertically-downward water level difference between wells G3S and G3DB shall not exceed 5 feet for more than 24 hours and shall not exceed 10 feet at any time during the test. Current water level differences between these wells is about 0.3

feet. Previous differences (1984) have exceeded 1 foot. The increased downward flux of water resulting from a 5 foot head difference between these wells for a period of 72 hours is equivalent to the volume of water which would flow downward under natural conditions during a 15 to 50 day period.

In order to make the necessary evaluations, water levels in the following wells on the Cryovac property must be monitored:

Well	To be measured by
G1S, G1D	ERT
G21S, G21D	ERT
G12S, G12D	ERT
G3S, G3D, G3DB	ERT
G10DB	GeoTrans
G14D	GeoTrans

W.R. Grace will provide resources to measure water levels for wells G10DB and G14D. These wells will be instrumented with pressure transducers and data loggers. It will be necessary for ERT to make periodic manual measurements of water levels in wells G1S, G21S, G12S, G3S, and G3D in addition to the originally planned measurements in wells G1D, G21D, G12D, and G3DB.

If you have any questions regarding this matter, please call Jay or me.

Sincerely,

John H. Guswa, Ph.D.
Vice President

JHG/sw
02251510
GEO/CB

cc: J. Bates, Goodwin, Procter and Hoar
D. Delaney, US EPA
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